

CLAIMS

What is claimed is:

1. A wheel end assembly for an axle comprising:
 - a non-rotating component;
 - at least one torque plate mounted to said non-rotating component;
 - a brake assembly mounted to said torque plate; and
 - a radial location member supported by said non-rotating component wherein said torque plate cooperates with said radial location member to transfer rotational brake torque between said brake assembly and said non-component through a solid interface.
2. The assembly of claim 1 including an axial location member supported by said non-rotating component wherein said torque plate cooperates with said axial location member to position said torque plate at a predetermined location along said non-rotating component.
3. The assembly of claim 2 wherein said non-rotating component comprises a trailer axle beam for a non-drive trailer axle.
4. The assembly of claim 3 wherein said brake assembly comprises a disc brake assembly.
5. The assembly of claim 1 wherein said radial location member comprises a plurality of male members supported on one of said torque plate or said non-rotating component and a

plurality of female members supported on the other of said torque plate or said non-rotating component wherein said male members are at least partially received within said female members to prevent relative rotation between said torque plate and said non-rotating component.

6. The assembly of claim 5 wherein said male members comprise a plurality of splines and wherein said female members comprise a plurality of grooves wherein said splines are received within said grooves.

7. The assembly of claim 5 wherein said male members comprise a plurality of protrusions and said female members comprise a plurality of apertures wherein said protrusions are inserted into said apertures.

8. The assembly of claim 5 wherein said male members comprise a plurality of teeth formed on a ring and said female members comprise a plurality of slots wherein said teeth are received within said slots.

9. The assembly of claim 5 wherein said male members comprise a plurality of pins and said female members comprise a plurality of holes wherein said pins are received within said holes.

10. The assembly of claim 1 wherein said axial location member comprises an end stop supported on said non-rotating component with said torque plate engaging said end stop to prevent relative axial movement between said torque plate and said non-rotating component.

11. The assembly of claim 10 wherein said end stop comprises a ring fixed to said non-rotating component, said ring having a greater diameter than said non-rotating component to form a generally circular flange wherein said torque plate directly engages said circular flange.

12. The assembly of claim 10 wherein said end stop comprises a non-torque bearing weld formed between said torque plate and said non-rotating component.

13. A non-drive trailer axle assembly comprising:
 - an axle beam having a generally tubular cross-section;
 - a first torque plate mounted to a first end of said axle beam;
 - a second torque plate mounted to a second end of said axle beam opposite from said first end;
 - a first disc brake assembly mounted to said first torque plate;
 - a second disc brake assembly mounted to said second torque plate;
 - first and second radial location members supported by said first and second ends of said axle beam wherein said torque plates cooperate with said first and second radial location members to transfer rotational brake torque between said first and second disc brake assemblies and said axle beam; and
 - first and second axial location members supported by said first and second ends of said axle beam wherein said first and second torque plates cooperate with said first and second axial location members to position said first and second torque plates at predetermined locations along said axle beam.

14. The assembly of claim 13 wherein each of said first and second radial location members comprises a plurality of male members supported on one of said torque plates or said axle beam and a plurality of female members supported on the other of said torque plates or said axle beam and wherein said male members are at least partially received within said female members to prevent relative rotation between said torque plate and said axle beam.

15. The assembly of claim 14 wherein each of said first and second axial location members comprises an end stop supported on said axle beam with said torque plate engaging said end stop to prevent relative axial movement between said torque plate and said axle beam.

16. A method of mounting a torque plate to a trailer axle component comprising the steps of:

- (a) providing a non-rotating axle tube for a non-drive trailer axle;
- (b) radially locating a torque plate on the axle tube with a first location member to prevent relative rotation between the torque plate and the axle tube;
- (c) axially locating the torque plate on the axle tube with a second location member to prevent relative axial movement between the torque plate and the axle tube; and
- (d) mounting a disc brake assembly to the torque plate.

17. The method of claim 16 wherein the first location member is different than the second location member.

18. The method of claim 17 wherein step (b) further includes supporting a plurality of male members on one of the axle tube or torque plate, supporting a plurality of female members on the other of the axle tube or torque plate, and inserting the male members into the female members and step (c) further includes forming an end stop about an outer circumference of the axle tube and abutting the torque plate against the end stop.

19. The method of claim 17 including performing step (b) without welding the torque plate to the axle tube.

20. The method of claim 16 wherein step (d) further includes mounting the disc brake assembly to the torque plate without requiring any additional machining to the torque plate subsequent to steps (b) and (c).